

WE CLAIM:

1. A method for operating multiple virtual wireless networks using a common distribution system comprising:

 providing portals from said distribution system to a plurality of local area network servers, each portal being associated with a tag for identifying messages for an associated local area network;

 providing at least one access point coupled to said distribution system, said access point including a memory;

 providing a wireless service set identification for each of said local area networks associated with said portals;

 providing mobile units having a service set identification associating said mobile units with one of said portals;

 providing data in said access point memory associating said service set identifications and tags associated with said portals;

 operating said mobile units to associate with at least one access point, said association including communicating a service set identification from said mobile unit to said access point;

 operating said mobile unit to communicate data to said associated access point, said communication including said service set identification of said mobile unit; and

 operating said access point to relay data messages from said associated mobile unit via said distribution system to said portal corresponding to the local area network associated with said service set identification, said relaying including verifying that said service set identification is associated with a local area message tag of said message in said access point memory.

2. A method as specified in claim 1 further comprising operating said access points to broadcast beacons having a single primary service set identification, and operating said access points to associate with mobile units having one of said primary service set identification and one or more secondary service set identifications, said primary and one or more service set identifications each being associated with a local area message tag in said access point memory.

3. A method as specified in claim 1 wherein said relaying by said access point includes including a tag in each relayed message corresponding to the tag associated in said access point memory with said service set identification included in said message from said mobile unit..

4. A method for operating multiple virtual wireless networks using a common distribution system comprising:

 providing portals from said distribution system to a plurality of local area network servers, each portal being associated with a tag for identifying messages for an associated local area network;

 providing at least one access point coupled to said distribution system, said access point including a memory;

 providing a realm identification for each of said local area networks associated with said portals;

 providing mobile units having a realm identification associating said mobile units with one of said portals;

 providing data in said access point memory associating said realm identifications and tags associated with said portals;

operating said mobile units to associate with at least one access point, said association including communicating a realm identification from said mobile unit to said access point; operating said access point to associate with said mobile unit and associate said mobile unit with one of said tags associated with said portals in said access point memory; and operating said access point to relay data messages from said associated mobile unit via said distribution system to said portal corresponding to the local area network associated with said service set identification, said relaying including providing a local area message tag in said message corresponding to said portal associated with said mobile unit.

5. A system for providing multiple virtual wireless networks comprising:
 - a distribution system;
 - a plurality of portals coupled to said distribution system each corresponding to at least one network, each portal being associated with at least one tag for identifying messages for an associated network;
 - a plurality of mobile units each having a service set identification associating said mobile unit with one of said networks;
 - at least one access point coupled to said distribution system, said access point including a memory having data associating said service set identifications and tags;
 - wherein said mobile units are arranged to associate with at least one access point, said association including communicating a service set identification from said mobile unit to said access point and to communicate data to said associated access point, said communication including said service set identification of said mobile unit; and
 - wherein said access point are arranged to relay data messages from said associated mobile unit via said distribution system with a local area message tag to said portal

corresponding to the local area network associated with said service set identification and arranged to verify that said service set identification is associated with said local area message tag of said message in said access point memory.

6. A system as specified in claim 5 wherein said access points are arranged to broadcast beacons having a single primary service set identification, and wherein said access points are arranged to associate with mobile units having one of said primary service set identification and one or more secondary service set identifications, said primary and one or more service set identifications each being associated with a local area message tag in said access point memory.

7. A method as specified in claim 5 wherein said access point are arranged to include a tag in each relayed message corresponding to the tag associated in said access point memory with said service set identification included in said message from said mobile unit.

8. A system for providing multiple virtual wireless networks comprising:
a distribution system;
a plurality of portals coupled to said distribution system each corresponding to at least one network, each portal being associated with at least one tag for identifying messages for an associated network;
a plurality of mobile units each having a realm identification associating said mobile unit with one of said networks;
at least one access point coupled to said distribution system, said access point including a memory having data associating said realm identifications and said tags;

wherein said mobile units are arranged to associate with at least one access point, said association including communicating a realm identification from said mobile unit to said access point and to communicate data to said associated access point; and

wherein said access point are arranged to relay data messages from said associated mobile unit via said distribution system with a local area message tag to said portal corresponding to the local area network associated with said realm identification in said access point memory.